p. 4
9
16
23

PAN AMERICAN fisherman

ESTABLISHED 1947

September
1955

☆

50c A COPY
$3 A YEAR

SEP 1955
LIBRARY
POFI
FISH & WILDLIFE
SERVICE

Insuring the Present . . . and the Future

As in the Past . . . So in the Future

All Activities of the American Tunaboat Association

Are Directed to the Improvement and Prosperity

of the Tuna Industry

Wade Ambrose
President

Harold F. Cary
General Manager

AMERICAN TUNABOAT ASSOCIATION

No. 1 TUNA LANE • SAN DIEGO, CALIFORNIA

National Fish Week

What is believed to be the first all-industry promotion ,of its kind—National Fish Week for October 3 to 8—was planned last month in New York at a meeting sponsored by the National Fisheries Institute.

The group that met, representing a majority of the segments of the fishing industry, approved a National Fish Week symbol and theme, "Join the Fish Parade," a merchandising program, and several pieces of merchandising material, all of which make use of the basic theme and emblem. Also a grocery trade advertisement announcing the Week was decided upon. The extent to which this basic program is enlarged will depend on the additional support which members of the industry give.

An aggressive national publicity campaign will be carried out through the cooperation of the National Fisheries Institute, Maine Sardine Industry, and the Shrimp Association of the Americas, as well as firms having individual publicity programs.

Business can be mixed with pleasure...

when you use *ship telephone service.* It links your pleasure craft with telephones all across the nation, as well as other ships at sea. And rates are surprisingly low. Chances are, the cost for most of the calls you will want to make will only be one dollar for the first three minutes (plus Federal tax).

For more facts on ship-to-shore telephone service, contact Pacific Telephone and ask for our free booklet, Ship Telephone Service.

Pacific Telephone

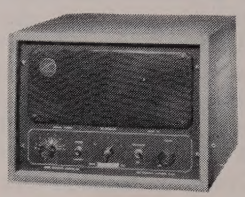
apelco covers the field

with quality, performance-proved models to meet every requirement of the commercial or pleasure boat owner . . . . . .

AE-156 CM

Model AE-156 CM: The finest! Seven crystal controlled channels, transmitter and receiver, in 2000-6000 kc range. Power input 210 watts four channels, 150 watts three channels. Receiver also has tunable marine range, BC and SW ranges.

MODEL 18

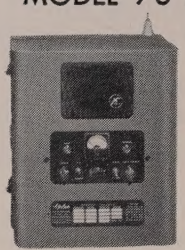


Model 18: Highly compact, effective, ideal for small craft. Four crystal controlled channels, both transmitter and receiver, in 2000-3000 kc range. Receiver also has tunable BC band. Power output 10 watts.

MODEL 190

Model 190: Rugged, moisture-proofed, powerful. Ten crystal controlled channels, transmitter and receiver, in 2000-3000 kc range. (4000-6000 kc on special order.) Power output 125 watts.

MODEL 76 B



Model 76 B: The ideal unit for moderate size vessels. Seven crystal controlled channels, both transmitter and receiver, in 2000-3000 kc range. (4000-6000 kc on special order.) Has power output of 60 watts.

Manufacturers of radiotelephone equipment in all power ranges . . . . direction finders . . . automatic pilots . . . . marine navigating and communications equipment.

APPLIED ELECTRONICS COMPANY, INC.
SAN FRANCISCO 3, CALIF.

CRUISE REPORTS

POFI Activities

The POFI research vessels *Hugh M. Smith, John R. Manning* and *Charles H. Gilbert* and the charter vessel *Commonwealth* departed from Honolulu last month on survey cruises to various regions of the Pacific.

The *Smith* is conducting an oceanographic survey in the area of the potential albacore fishery between 25° N. and 50° N. latitudes and 180° and 158° W. longitudes. This cruise is a part of the cooperative oceanographic study of the entire North Pacific north of 25° N. latitude, called Operation NORPAC, in which vessels from the Scripps Institution of Oceanography, University of Washington, Pacific Oceanographic Group of Canada and several Japanese agencies are also participating. Results of a survey of this nature should be particularly beneficial in furthering the understanding of the relationship among meteorology, oceanography and fishing.

The *Manning* cruise has been designed to sample both deep-swimming large albacore and surface-troll albacore in the northeast Pacific. Longlining will be conducted daily along sections between approximately 30° and 45° N. and 150° W. and the mainland. Intensive trolling will also be a part of the survey program

The *Gilbert*, working in the Hawaiian waters, tagged a total of 323 skipjack during the month. Of these, 57 were "season" fish (20-pound size group) with the remainder in the 3- to 5-pound size group. This brings the total number of skipjack tagged up to 1,226. Four tagged fish have been recaptured by local sampans. Although the recaptured fish have not shown any significant migration, they have demonstrated the ability of the skipjack to withstand the tagging operation.

The *Commonwealth*, arriving in the area of Christmas Island (Line Islands) on 15 July, is continuing the year-around study of the fluctuations of yellowfin abundance in this central Pacific equatorial area. Using both longline and trolling methods the catches have been good as compared with those during the *Commonwealth's* last cruise—May and June 1955. Thirty of the yellowfin thus caught were tagged and released.

Good Yellowfin Catches Near Equator

The *Commonwealth*, a fishing vessel under charter to the U.S. Fish and Wildlife Service, Pacific Oceanic Fishery Investigations, made good catches of yellowfin tuna near Fanning Island, according to Dr. A. L. Tester, Director of this fisheries research unit. The ship returned to Honolulu on August 16 after a six weeks cruise to the Line Islands. This was the third cruise in a series which will extend throughout 1955 to study changes in the seasonal abundance of tuna in the equatorial region.

Three methods of determining abundance were used: scouting bird flocks, surface trolling, and longlining. Scouting for over 100 hours revealed 43 working bird flocks. Although trolling around the islands was not as productive as on previous trips during May and June, longline catches on this cruise were much better. Two days near Fanning Island each yielded over six yellowfin per 100 hooks, the fish ranging from about 25 to 180 pounds in weight. The Line Island longline catches of yellowfin so far this year are higher than in 1954, according to Captain E. O. Oswald, skipper of the *Commonwealth*. Captain Oswald was in charge of one of the commercial vessels that found surprisingly few fish in this area last year.

Dr. Tester reports that in additio to determining abundance of yellow fin, a tagging program is being use to study possible migration of thi species. Approximately 700 yellowfi have been tagged in the equatoria area but to date no recoveries hav been made.

A site has been located at Chris mas Island for a submerged recor ing sea thermometer and a dumm instrument was installed to test th anchor system. When the thermon eter is installed it will maintain a si months record of sea temperature an will help to explain the fluctuatio in tuna abundance, it is hoped.

"Yellowfin" Cruise Repor

Cruise 5 of the *M/V Yellowfi* for 1955 sailed July 15 from L Angeles Harbor and returned the July 29, 1955.

The area surveyed was along th coast of Southern California from P Conception to Pt. La Jolla, includin Santa Cruz, Santa Rosa, Anacap Santa Catalina, and San Clemen Islands. This was designed to asse the relative abundance of Pacific sa dines, jack mackerel, Pacific mac erel, and anchovies off the coast California and Baja California.

Results: 50 light stations were o cupied. Sardines were sampled at s stations, anchovies at 14, Pacif mackerel at 12, and jack mackerel eight. In addition to the samples co lected, Pacific mackerel, anchovi and sardines were observed but n collected at one light station each.

The *Yellowfin* traveled a total 427 miles while scouting for fis 139 schools were bserved visual or with the aid of the Sea Scana 18 of these were estimated to be sa dines, 49 Pacific mackerel, 2 ja mackerel, 28 anchovy, 5 saury, a 37 were unknown. Two schools large fish (presumably bluefin tun were observed off Pt. Mugu and La Jolla. A large school group sardines was observed in the San Barbara channel between Santa Cr Island and Pt. Hueneme but cou not be sampled due to adverse weath conditions.

AN AMERICAN Fisherman

shed Monthly • Established 1947

KEllogg 8-5441
Orange Savings Bldg.
ORANGE, CALIFORNIA

"BUSINESS MAGAZINE OF THE WEST COAST FISHERIES"

BRIANT SANDO—Editor and Publisher

ROBERT K. LAWSON
Associate Editor

STAFF PHOTOGRAPHERS
Busco-Nestor Studios

VOL. 10 — No. 2
SEPTEMBER
1955

ADVERTISING REPRESENTATIVES

Richard S. Meyer
3137 Kelton Ave.
ANGELES 34, CALIF.
phone Bradshaw 2-1456

A. S. Babcock Co.
605 Market Street
SAN FRANCISCO 5, CALIF.
Telephone Yukon 2-3954

Howard F. McClenahan
402-1010 Euclid Bldg.
CLEVELAND 15, OHIO
Telephone Prospect 1-6100

ndergast & Minahan
8 N. Michigan Ave.
CHICAGO 1, ILL.
phone Financial 6-0993

W. R. Ewald
31 Barbour Terrace
BLOOMFIELD HILLS, MICH.

C. A. Larson & Associates
254 West 31st Street
NEW YORK 1, N. Y.
Telephone Longacre 4-4285

BLE OF CONTENTS

PAGE

tional Fish Week, Oct. 3-8 3
uise Reports 4
54 Fisheries Expenditures 6
port from Washington, D. C. 7
here Are the Fish? 9
naboat Insurance 10
n Pedro Fishermen's Fiesta 12
ogress and Production 14
des of the Industry 15
uefin Tuna Exploration 16
e Globe 24
rplane Spotting Flight 25

About This Issue . . .

SOME last-minute news about price reductions to the fishermen by the canneries were carried on this page in our last month's issue. This month the news is a little better—prices back up $20 a ton on albacore, as you can read in detail in "Report from Washington," on page 7.

*

Visitors from Japan — some have been here and more are coming—are also covered on pages 7 and 8. This helped to keep the tuna temperature boiling . . . and some folks think that's what brought on the torrid weather across the United States. Anyway, the weather and some other things have been "unusual."

*

Another hot subject in commercial fishing circles everywhere: What can be done about boat insurance? The perils of the sea are well covered by that well known expert, Jerome Sachs, on pages 10 and 11.

*

On the front cover is shown Nick Mardesich's 65-foot purse seiner New Home II "stacking" sardine net aboard at Fishermen's Wharf, San Pedro; later will store it ashore until sardine season starts October 1, the opening day of the two-day Fishermen's Fiesta—see page 12 for details.

Sando Publications: PAN AMERICAN FISHERMAN • FRUIT & VEGETABLE REVIEW • MOTOR WEST

n American Fisherman is published monthly • Business and executive offices—Orange Savings Building, Orange, California, telephone KEllogg 8-5441. stmaster: Form 3579 requested. Subscription rates in the United States and possessions, one year $3.00; two years $5.00; five years $10.00. Canada $4.00 per ar; all other countries $5.00 per year. Current copies 50c each; back numbers $1.00 each when available. In case of change of address, subscribers are quested to notify both the Post Office and us, and allow one month for change to take effect. Entered as second class matter March 12, 1953, at the Post ffice at Orange, California, under the Act of March 3, 1879. Printed in U.S.A.

1954 EXPENDITURES

OF THE

FISHING INDUSTRY

FOLLOWING several requests, expenditures of the fishing industry in 1954 were estimated to show the purchasing power of this industry within our national economy. The estimates, made by the Economics and Cooperative Marketing Section, Branch of Commercial Fisheries, FWS, refer to the following four levels of the fishery industries:

Vessel Operation
Canning and Processing
Wholesaling
Retailing

1.—Vessel Owners Expenditures

Total income, 1954.....$345,000,000
Estimated expenditures for:

Boat supplies and repairs	11.8%	40,710,000
Fishing gear and nets	3.7	12,765,000
Ice	4.0	13,800,000
Fuel	7.2	24,840,000
Food for crew	7.5	25,875,000
Insurance	4.4	15,180,000
Other	2.4	8,280,000
	41.0%	$141,450,000

Note:—Depreciation, direct and indirect labor, compensation to fishermen, and taxes are not included.

2.—Canners and Processors Expenditures

Total income, 1954.....$580,000,000
Estimated expenditures for:

Transportation to cannery	1.2%	6,960,000
Condiments	5.1	29,580,000
Insurance	1.2	6,960,000
Cans, cases and labels	17.7	102,660,000
Repairs	1.9	11,020,000
Warehousing and freight	2.4	13,920,000
Sales, brokerage	3.1	17,980,000
Heat, light, power	0.6	3,480,000
Advertising	1.6	9,280,000
Bank interest and miscellaneous expense	1.0	5,800,000
	35.8%	207,640,000

Note:—Depreciation, direct and indirect labor, raw material, and taxes are not included.

3.—Fish Wholesalers Expenditures

Total income, 1954.....$820,000,000
Estimated expenditures for:

Rent	1.6%	13,120,000
Packaging supplies	2.0	16,400,000
Delivery expenditures	3.5	28,700,000
Refrigeration costs	1.0	8,200,000
Telephone and telegraph	0.6	4,920,000
Repairs	0.3	2,460,000
Heat, light and power	1.8	14,760,000
Advertising	0.5	4,100,000
Insurance on buildings	0.5	4,100,000
Insurance on merchandise	0.7	5,740,000
Ice and water	0.5	4,100,000
Salesmen brokerage	1.5	12,300,000
Collection of debts and miscellaneous expenditures	0.8	6,560,000
	15.3%	$125,460,000

Note:—Purchases, wages and salaries, depreciation, and taxes are not included.

4.—Retailers Expenditures

(Referring to fish retailers and fishery departments in combination and chain stores)

Total Income, 1954....$1,070,000,000
Estimated expenditures for:

Rent	3.6%	38,520,000
Ice and storage (warehousing)	1.4	14,980,000
Wrapping supplies	2.4	25,680,000
Delivery	1.8	19,260,000
Repairs	0.9	9,630,000
Gas and electricity	0.5	5,350,000
Telephone and telegraph	0.4	4,280,000
Insurance	0.7	7,490,000
Advertising	1.4	14,980,000
Laundry	0.7	7,490,000
Miscellaneous	0.4	4,280,000
	14.2%	$151,940,000

Note: — Purchases, depreciation, wages and salaries, and taxes are included.

Summary of Estimated Expenditures

Aggregate spent in 1954 by:

Boat owners	$141,450,0
Canners and processors	207,640,0
Wholesalers	125,460,0
Retailers	151,940,0
Total	$626,490,0

Note: — Excludes expenditures raw materials, purchases, compen tion of fishermen, direct and ind ect labor, losses for depreciation, a taxes.

California Landings

Landings of commercially-cau fish and shellfish at California po during April 1955 totaled 36.4 m lion pounds, according to figures leased by the U.S. Fish and Wildl Service in cooperation with the Ca fornia Department of Fish and Gar Marine Fisheries Branch. This rep sents an increase of less about 1 over the catch during April 1954

Receipts of domestically-cau tuna and tunalike fishes again do nated the state production with 2 million pounds being landed dur April. These receipts comprised 56 of the month's total landings. Co pared with the landings of tuna a tunalike fishes during April 19 however, production of these spec was off 3.0 million pounds, or 13

Following the tuna group, spec of greatest importance landed dur April were anchovies (5.9 mill pounds), squid (5.0 million pound sole (1.5 million pounds), and ja mackerel (1.2 million pounds). Co pared with the landings of these s cies during April of last year, anc vies were up 43%, squid were 230%, sole were down 11%, a jack mackerel rose 35%.

Total landings for the first f months of the current year amoun to 112.8 million pounds, compa with 125.7 million pounds repor for the same period of last year decrease of 12.9 million pounds, 10%. During the first four mon of 1955, shellfish items accoun for 9% of the total landings w squid, dungeness crab, and abal being the most important species. the remaining 91%, represented the finfish, the most important ite were the tuna group (58.2 mill pounds), squid (5.7 million pound anchovies (622.9 million pound rockfishes (4.4 million pounds), a sole (4.2 million pounds). The tu and tunalike fishes alone accoun for 52% of the total landings d ing this period.

Report from Washington

Items Gleaned from the Nation's Capital

NO REST FOR THE WEARY."--That Biblical quotation certainly applies to ashington and the tuna situation this summer. With the Congress in djournment until fall, and the summer months filled with heat and humidty, most important men and events around here have followed the pattern et by Ike and gone off for some relaxation. But not the tuna problem!

The Japanese import situation keeps rearing its ugly head in different places and at different times--with almost monotonous regularity. here was a big meeting of all the top government officials who were nvolved in this matter and who were still in town the middle of August . . along with Charlie Carry and others from California.

Carry knows his way around in government as well as in fishing ndustry circles. Formerly head of the Fisheries Division of the National anners Association here in Washington, he is now manager of the California Fish Canners Association at Terminal Island, Calif.

The meetings here were followed by others in California . . . some t San Diego, San Pedro and, as we go to press, a big shindig is scheduled or Los Angeles with top officials from Japan sitting in.

--o--

HAT'S THE ANSWER?--Of course what boat owners and fishermen are asking s a result of all these meetings--these goings and comings--is: what are e going to get and when? What's the answer?

Right now there is no final answer apparent. However, some progress is being made. For example, this magazine a month ago reported a cut of $40 a ton in the price of albacore (down from $350 to $310) to be paid by the canners to the fishermen. This led to a lot of meetings and bitter feeling, and since then Van Camp, Star-Kist, and the other canners, have "split the difference" and gone back up $20 a ton, raising the price now being paid from $310 to $330 a ton.

The old law of supply and demand had something to do with this, too: albacore have not been so plentiful this summer. Their stocks have declined in sharp contrast to the oversupply of yellowfin and skipjack tuna brought in by the long range clippers and by the Japanese imports.

--o--

JAPANESE VISIT U.S.--The Foreign Minister of Japan, Mamoru Shigemitsu, with his staff of four aides, spent the last three days of August in Washington holding discussions with Secretary of State Dulles and other U.S. officials on "matters of mutual concern to the United States and Japan."

Insiders say that one of the hottest of these "matters of mutual concern" was the tuna import situation. Before departing by air for Los Angeles, preparatory to returning to Japan with his daughter and staff,

Shigemitsu told the press that he believes "all the current problems between our two countries can be solved by frank talks around the conference table . . . it will be to our mutual advantage to work them out in a friendly fashion."

--o--

MORE COMING.--In line with the above, the Japanese tuna industry "friendship Delegation" is expected to arrive in Washington early in September to "assist" the Japanese Agriculture Minister Kono in tuna talks with U.S. officials.

The "Friendship Delegation" will consist of the following: Niichiro Miyake, Vice President, Japan Export Frozen Aquatic Products Manufacturers Association; Masao Onishi, Managing Director, Taiyo Gyogyo K.K.; Higashi Nishijima, Chief, Foodstuff Department, Daiichi Bussan K.K.; Giichi Matsumoto, President, Tokyo Tuna Sales Co.; Seiichi Shibano, Vice President, Japan Tuna Packers Association; Yoichi Sakurada, President, Sakurada Sangyo K.K., and Yoshio Konagai, Managing Director, Shimizu Shokuhin K.K.

--o--

DIFFERENT KIND OF TALK.--While this friendship talk sounds good, there's an undercurrent worth noting. First, the Japanese tuna industry has revived the "Council on Tuna Exports" in order to present a united front in dealings with the United States. It is expected that this Council, with the unofficial assistance and advice of the Japanese Government Fisheries Agency, will become a dominant factor in Japanese tuna exports.

Secondly, about 100 representatives of the tuna industry met in Tokyo and listened to an address by Shinsaku Hogen, until recently Japanese Consul General at Los Angeles.

The following paragraph is a summary of Mr. Hogen's remarks as published in the trade press:

"American Congressmen are very aggressive in protecting the interests of the fishermen and canners in their districts; this is particularly true of Cecil King of San Pedro and Bob Wilson of San Diego. The Tuna Research Council is controlled by three large packers, Van Camp, Star-Kist and Westgate, and has $7,000,000 available for exerting influence on newspapers. The news which is published reflects the interests of these large packers, Japan is unilaterally made to appear in the wrong, and the opinions of the small and medium-sized packers, which differ from those of the large companies, are ignored. The Japanese should cooperate to the limit of their ability with those American firms which depend on imports from Japan for their supplies of raw fish. Particularly if a quota on imports of frozen tuna should be imposed, Japan must make sure that the three large packers do not pre-empt the whole quota and drive out of business those smaller firms which have the closest and most friendly connections with Japan. Japan must make every effort to maintain stable prices for raw and canned tuna. While it is true that prices will follow the economic laws of supply and demand, any increases or decreases in prices should be applied gradually so as not to disrupt the market."

--o--

ADVISORY COMMITTEE MEETS IN BOSTON.--The American Fisheries Advisory Committee, authorized under the Saltonstall-Kennedy Act, held its second

(Continued on page

ALBACORE LOCALE

Where Are the Fish?

By HAROLD B. CLEMENS

OF prime importance to every fisherman, sport or commercial, is the question, "Where are the fish?" In the case of a wide-roaming fish like the albacore this question assumes real significance. Predictions as to where and when this prized tuna will appear can mean a great deal in dollars and cents to commercial fishermen, canners and sports boat operators, and in pleasure to the recreational fishermen.

In order to answer the question it is necessary to know the pattern of past catches. A knowledge of where and when albacore were caught in previous years will give an insight into the future.

The California albacore fishery is highly seasonal, being pursued only in the summer and fall. Catches are extremely variable from year to year. The more that is learned about this species, the better are chances for stabilization and expansion.

When the albacore investigation was expanded in 1951, the gathering of data on commercial catch localities was intensified. Also under study are migrations, racial relationships, size at maturity, exploratory fishing methods, environment, and all the factors that bear upon a continued harvest at a high level.

This report describes the results of one of the lines of investigation into the life history of the albacore, a study being made with the objective of improving the fishery. Basic to any survey of this sort is an understanding of the location of the most productive fishing areas in both time and space. Summarized herein are the available data which delineate the fishing areas exploited by the California fleet.

Extent of Albacore Fishery

Albacore occur along the Pacific Coast of North America from southern Baja California to Alaska between latitudes 25° and 59° north. From 1939 to 1945 considerable commercial quantities were taken off Oregon, Washington and British Columbia but since 1945 the majority of the fish have been caught in an area between Baja California and San Francisco within 400 miles of the coast.

The fishery comprises vessels of myriad sizes, shapes and descriptions using two types of gear, live bait and trolling. The smaller boats, usually under 30 feet in length, catch fish primarily on lures trolled astern near the surface of the water by lines of varying lengths. A trolling vessel has a 20- to 30-foot eucalyptus pole rigged on each side. When fishing, the poles are lowered to a suitable height above the water. To each pole several trolling lines are attached with a steel or rubber spring in each to absorb the initial shock of a striking fish. The lines are graduated in length and so rigged that each can be pulled inboard without fouling the remaining lines.

The larger boats, usually over 30 feet in length, carry a bait tank piped for running sea water into which live bait, sardines or anchovies, is loaded. Depending on economic factors, fishermen will either capture all of their own bait or will purchase it from live bait fishermen before departing and subsequently catch additional bait on the Baja California bait grounds. These vessels locate albacore schools primarily by trolling lures through the water.

When a fish strikes, the vessel is immediately stopped and a steady stream of live bait chum is thrown overboard to attract the school. Meanwhile the trolling lines are secured and the fishermen start catching fish with live bait on hooks attached to hand lines or with artificial squids attached to conventional striker pole lines. As long as fishing is in progress live bait is continu-

(Continued on page 20)

Mr. Clemens is with the Marine Fisheries Branch, State of California Department of Fish and Game.

☆

PERILS OF THE SEA

Jerome Sachs, Director of the Insurance Staff of the Bureau of Foreign Commerce, of the United States Department of Commerce, plunged into a most interesting and highly controversial subject in a speech before the Gulf and Caribbean Fisheries Institute held in Havana recently, when he delivered a talk entitled "Some Observations on the Insurance of Commercial Fishing Vessels." Because of the great interest in this topic in the Pacific Coast area, and because of the quality of Mr. Sachs' thinking on the subject, we are presenting his article "What Can Be Done About Fishing Boats?" in which the more specific recommendations of his Havana talk are spelled out.

☆

TUNABOAT INSURANCE

By JEROME SACHS
Director, Insurance Staff,
U.S. Department of Commerce

In a general sense, the commercial fishing vessel insurance problem may be summarized as the problem of safety at sea with its special application to commercial fishing vessels. This insurance of fishing vessels has to do with the seaworthiness of hulls, the maintenance of equipment, and the operation and safety at sea of vessels and crews engaged in the business of catching fish. The losses suffered by insurance companies in connection with Hull as well as P. & I. coverages on commercial fishing vessels have been persistently high in recent years.

A Losing Proposition

It has been a losing proposition for the insurance companies despite increases in premiums. The patience of some of the insurance companies in hanging on despite continued high loss ratios is, I have a hunch, testimony to the skill and resourcefulness of the brokers who, on behalf of the vessel owners, have been placing this business with those insurance companies, as well as evidence that these brokers were probably bringing a lot of other unrelated non-fishing business to those insurance companies that was turning out to be profitable.

This article originally appeared in the Western Underwriter, a leading insurance publication in San Francisco, and is reprinted with their permission.

The fundamental principle of marine insurance is that the contract is *uberrimae fidei*, that is, one based on the utmost good faith. A basic foundation stone of insurance is that the insured act as if there were no insurance. If the utmost good faith is not observed by the vessel owner or by any intermediary (broker) employed in the transaction, the aggrieved party is entitled morally and legally to call it "quits." In practice, a duty rests on the vessel owner, and the crew, whose interests are tied in with the interests of the vessel owner, and on the broker, to disclose all material facts and to make no misrepresentation on any subject related to the risk, such as would influence an insurer in considering whether to accept or decline the risk. The so-called Sue & Labor Clause which appears in every marine insurance policy means in substance that, in dealing with an accident or with a loss, the insured vessel owner should act as if he were uninsured.

Moral and Mental Hazards

Now I would like to talk about the mental attitude of the policy-holder. The mental attitude is always important in evaluating a risk, just as important, in many cases, as the physical risk itself. With regard to the insurance of commercial fishing vessels, the attitude of the vessel owner and of the crews are of special importance, one might almost say of crucial importance. Furthermore, in this connection, it may be noted that P. & I. risks are of a kind over which the vessel owners can exercise a more direct influence and control than, for example, fortuitous hull losses resulting from some peril of the sea.

I am trying to point out that the moral hazard faced by an insurance company is not limited to the personal or business ethics of the insured or to malice on his part. There are various aspects of moral hazard. These include such conduct as poor seamanship; disdain of training needed for proper use of scientific navigating instruments; carelessness in equipment maintenance; resorting to blind navigation in fogs; failure to pay any attention to charts; maintaining the decks and the engineers' rooms in bad condition; dropping cigarettes on decks where oil is in abundance; pouring oil in the bilges; using all personnel on the vessel to help bring in the net, leaving no one on watch in the engine room; allowing drunks to get on board; disinterest in and ignorance as to how the motor works; as to how to judge performance; as to how to tune it up; as to how to remove defective parts

that motors will not be permitted run until they fall apart; venturg out too far looking for new fishg banks, for new shrimp beds, conlering the size and condition of the ssels and its equipment; staying it until the last moment despite eather conditions. These are the eleents in moral hazard that make for ersonal injuries, for destruction and ss of the property and thereby for creased insurance losses.

ccupational Group Attitude

The moral hazard of psychological titude that pervades the field of mmercial fishing is not an indidual, but a group matter. It is not rimarily a matter of race or nationity or culture, but rather an occuational group matter. The occupaonal group is one in which the dividual man is willing to undergo ie loneliness of the open seas in a nall boat, unprotected, away from vilization, with no one outside his nmediate group of fellow crew iembers to see him in his plight, ithout fire engines or policemen to ome to his aid in trouble. These men re not factory workers, functioning n roomy quarters and with first-rate onditions of sanitation. No agricultral workers, no factory workers, ertainly no office workers, have such rough life; even a migrant worker's abitation on land is better. This is life of great courage and self-conidence. This man feels he can take are of himself in any situation, otherwise he would not have accepted he life of a fisherman. There is also strong streak of fatalism in his character. An old proverb comes to mind; "The fates lead the willing and drag the unwilling." This seems to be the commercial fisherman's creed.

Just as every coin has two sides, that very courage, that very fatalism, that very ability to face separation away from one's family, has as its opposite side, a disdain for precaution, a feeling that it is unworthy and time-wasting to worry about accident prevention methods. The manliness that enables these men to fend for themselves and to take this rough life in open seas is just what makes them disdainful of prevention and protection methods.

Reconciling Qualities

Therefore, helping this industry to solve its insurance problem becomes a problem of reconciling these character traits with a persistent and continuous observance of safety precautions. Is it not possible to reconcile the sterling qualities of manliness and courage of this group with some regard for precautionary measures that would make it possible to give them insurance, more or less as other occupational groups are given insurance? The problem of helping the industry insurance-wise is the problem of making it merit insurance in the ordinary way. This problem is different in the sense that the ordinary degree of fear of danger and physical injury is lacking among this group.

I would like to list various suggested methods for aiding in the solution of this problem that I have heard or come across from time to time. Such a list may be useful in stimulating further consideration and discussion. The list undoubtedly can be added to; it is not being submitted in any connected or co-related or systematic form. Constructive suggestions are needed from everyone having a knowledge of the industry's problem. I offer this list without any intention of urging or promoting the adoption of any of the measures mentioned. Nor are these measures presented in any order of importance. As you will see, some of these measures are fundamental and far-reaching, while others are more modest. Here they are.

Standards and Inspection

1. Commercial fishing vessels should be subject to official standards, with inspection and certification by recognized surveyors, plus a follow-up procedure. In this connection, it has been suggested that fishing vessels should be brought within the purview of the U.S. Coast Guard, with a view to their complying with its construction and maintenance standards imposed, for example, on passenger and cargo vessels; e.g., as to hull, engine installations, loading equipment, safety appliances, rescue apparatus, periodic drills in use of equipment, etc. This might be tied in with a system of industry self-regulation, that is, an industry classification system with a Government agency accepting the Industry's Certificates.

Certified Personnel

2. Some agency, whether governmental or private, should be empowered to establish and certify the qualifications for seagoing personnel on fishing vessels. Some regulations or standards should be cooperatively developed within the fishing industry with the backing of Government enforcement of such Industry-developed standards. There should be a Government regulation requiring that the master, engineer, and navigating personnel on commercial fishing vessels be licensed. In this connection, if licensing were to be required, my own feeling would tend toward a limited system of licensing; that is, no license to new personnel without training and a qualifying examination. Those captains, masters, engineers, and navigating personnel already operating as such for years, should not be bothered. Finally, crewmen should not just be required to be competent fishermen but also competent seamen.

(Continued on page 18)

A SALVAGE JOB

Don Loker with Queens at last year's Fiesta

Fishermen's Fiesta

At San Pedro, October 1 and

THEY'RE polishing up the crown for San Pedro's Fishermen's Fiesta October 1 and 2 when Los Angeles Harbor becomes the fun capital of the nation as well as its fisheries capital.

This event also will embody a serious religious aspect, the blessing of the huge fishing fleet, a traditional significance since the Apostles sailed the Sea of Galilee.

In the lighter vein a bevy of pretty daughters of fishermen will be tossing their charms before judges early in September for selection as Skipperette and Mates, to rule over all Fiesta activities. So far brownettes and brunettes predominate, with only one petite blonde competing.

They've paraded plush rooms and docks and even climbed ships' rigging in shorts and swim suits for photographers. They'll pass in final review before a jury panel of Los Angeles newspapermen and a fashion designer.

The rewards are great: cash and wardrobes and honors. The Skipperette and mates will take on legal status at the Coronation Ball September 17, attended by guards of honor. And from then on they will receive all dignitaries and officiate at every important Fiesta event. The Skipperette actually will signal the start of the gigantic parade of tinsel and old lace—the parade of decorated fishboats, the climactic event of the Fiesta.

As in the past, skippers will decorate many of their own boats. But for the first time also, there will be a big class of sponsored vessels, adorned by specialists. They are expected to be even more colorful than usual. Last year, however, crews and families decorating through the night also won important prizes.

The Fiesta, conceived and backed primarily by fishermen and now in its ninth consecutive year, is receiving assistance from the county and city as well as the Harbor Department, and is sponsored by the San Pedro Chamber of Commerce.

Scores of public personalities—federal, state and local—participate annually. Last year Vice President Richard Nixon was the honored guest, and Los Angeles' own James Francis Cardinal McIntyre did the traditional blessing of the fleet and presided at the earlier Solemn High Mass of Thanksgiving. The ensuing ceremony at the dock before 250,000 spectators when the religious entourage in royal robes passes through its military and church guards of honor, always is one of the more colorful events.

Finally, costumed daughters fishermen toss flowers on the wate in remembrance of fishermen wh didn't come back. Then the Skippe ette presses the signal and the dec rated fleet begins its gay para through Los Angeles and Long Bea Harbors.

Who will be the "big name" civi ian in place of Vice President Nixo this year has not yet been revealed.

Many events will precede the p rade. Ladies' Day, September 3 will see harbor women entertainin 700 Los Angeles women on a crui of the two harbors followed by lunc eon at the Officers Club at Fort Ma Arthur. There also will be commu ity dance along the half-mile Fishe men's Wharf.

On October 1 and 2 there will folk dancing by many nationaliti and booths serving food of such n tions. There will be "pitch" game carnival events and competition f dexterity between fishermen in men ing nets and splicing ropes. The will be boat rides and free movies the harbor, and ferris wheels a fish fries. There will be open hou aboard naval vessels nearby. A these events combine to make th annual affair one of the most ou standing in fisherdom.

"Two Year Plan" on Salmon

Showing a desire to develop a program of stability, members of the Fisheries Association of B.C. and the United Fishermen and Allied Workers, Native Brotherhood and Vessel Owners have come to terms on a salmon price agreement for 1955 and 1956. Prices payable to the fishermen were settled for all areas as follows.

	1955	1956
Sockeye	24c	24c
Cohoe, Steelheads	15c	15c
Pinks	8¾c	9c
Chums	6½	6½c
Fall Chums	9c	9c
All other areas	7c	7c

This marks the first time in the industry's history that agreement was reached on a two-year term for minimum salmon prices. Throughout the entire negotiation period the keynote of stability for the industry as a whole was sounded by E. L. Harrison on behalf of the Operators. He declared that history had proved wide fluctuations in prices had invariably had a devastating effect on the whole industry when readjustments were necessary and he urged that stability on a market which saw the orderly movement of the commodity be retained. On the same theme, Homer Stevens asked if consideration for the economic stability of fishermen was considered by the Association and toward this end he suggested a two-year agreement.

In agreeing to such a contract, Mr. Harrison declared there would be a risk involved due to the very nature of world markets but he thought the stability to be gained from a planned processing and marketing program would to a degree offset the hazards. There may be an idea here for the tuna industry.

Echo Sounding Experiments

Fish of different sizes may be identified eventually with one sounding, and it may then be possible to estimate the number of identified fish within one sounding.

Two conclusions were reached by scientific officers on the British Ministry of Agriculture and Fisheries, in a report on "Echo Sounding Experiments on Fish."

(1) That it is possible that fish of different sizes may be identified eventually with one sounding. If so, it may be then possible to estimate the number of identified fish within one sounding; (2) that the air bladder taking up 5% of the volume of a fish is probably responsible for 40-80% of the returned signal.

Australian Tuna

Australia's young tuna industry has been suffering from growing pains, reports an Australian fishery magazine. Marketing problems, temporary suspension of buying by canneries on the south coast of New South Wales and price reductions caused misgiving and brought a flood of wild statements.

However, Australian tuna produces a canned product that rates good in world trade commodities. Tuna is the first Australian fish product which potentially can match imported fish in quality and price . . . so the people "down under" think tunas may provide the mainstay of a strong Australian fish-canning industry.

LASTING PROTECTION FOR WOOD AND METAL BOTTOMS

INTER-TROP NO. 50

...International Paint's Protection Against Fouling of All Kinds

Inter-Trop No. 50's toxic qualities have been tested in arctic and equatorial waters alike with this result: *High resistance to every type of fouling growth and worms.* Easy to apply because formulated with a full body; and Inter-Trop is economical because it is laboratory-engineered for long life.

Interlux SILVER PRIMOCON

. . . International's Positive Primer

A specialized primer for metal bottoms! Practically impervious to salt-water. Primocon seals off plates, seams and rivets of dissimilar metals which tend to corrode by electrolysis. Use under Inter-Trop No. 50 for maximum protection against fouling.

At marine paint stores and depots throughout the world, or write for descriptive literature.

International Paint Co. (Cal.) Inc.
South Linden Ave., South San Francisco, Calif.
World's Largest Marine Paint Makers

Subscribe Here . . .

12 ISSUES $3

TWO YEARS FOR $5

MAIL THIS NOW . . .

PAN AMERICAN FISHERMAN
Orange, California

Please start my subscription with the next issue

..... 1 year $3

..... 2 years $5

(Canada $4 per year)
(Foreign $5 per year)

Name _____

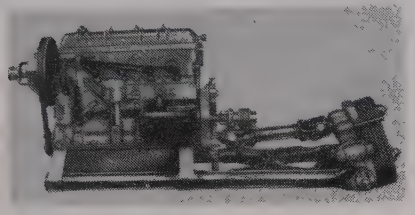
Firm _____

Street _____

City _____ Zone _____

State _____

PROGRESS & PRODUCTION



Aerojet Marine Engine

The Fageol Aerojet marine engine is a power package, available as optional equipment in over 60 makes of boats, also offered for easy installation by kit boat builders or by boat owners who wish to convert outboard hulls to inboard power.

Outstanding Fageol feature is its high compression (9 to 1) economy. Other features include push button starting and full electrical system, "float" mounting on rubber cushions and "noise-free" exhaust system. For complete data, write Fageol Products Company, Kent Ohio. Ask for Bulletin LL-1693.

Portable Direction Finder

A new model Raytheon "Lo-Loop" Portable Direction Finder is said to establish a new high in marine portable radio sensitivity. Redesign of the speaker and output transformer produces bell-like reception and adds new safeguards against salt water corrosion, yet the price is low.

Completely portable, the Raytheon Model GM-114-B Radio Direction Finder operates from either a self-contained battery or from an external 115 volt AC-DC power source.

Motor Care

A new product, known as Motor Care, the product that cares for your motor, is now available. This ingredient, when added to your motor oil gives such astonishing results as, balanced compression, friction free lubrication, revives lagging power, builds normal oil pressure, stops oil burning, stops wear and hydraulic valve tappet noise and eliminates varnish and carbon.

Motor Care gives a liquid motor overhaul, it oil-plates as it lubricates; can be used in every internal combustion engine. Manufactured and distributed by Haral Company, 2124 No. Damen Ave., Chicago 47, Ill.

Marine Radar Sets

The all-seeing eye of radar was installed on a total of 44 ships last month, according to the Federal Communications Commission. Of the total, 31 vessels were equipped with Raytheon Manufacturing Company's Model 1500 "Mariners Pathfinder" radar, and one with that firm's large "Mariners Pathfinder," 1400 series.

An increasing number of seagoing vessels from the largest liners to the smaller craft such as fishing boats, yachts and tugs are being outfitted with modern radar. It enables a skipper to guide his ship safely through fog, storm, and darkness much more safely and surely.

New Fuel Oil Hose

A new fuel oil hose has a synthetic rubber cover that is compounded especially to resist abrasion when dragged over rough places; it will not mark boat decks or walkways.

The "Fuelmaster" hose is designed for use in high or low temperatures. It resists sun-checking, weathering and aging action of fuel oil and gasoline. Manufactured in three sizes—1, 1¼ and 1½ inches. Made by the Thermoid Company, Trenton, N. J.

Speed-Slip Calculator

Graymarine's Speed-Slip Calculator, popular for 15 years with naval architects and boat owners, is again available. This "circular slide rule" enables you to check the efficiency of your boat, its propeller and engine.

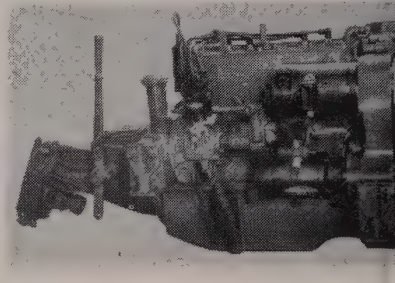
The operating principle of this calculator is based on the correlation of propeller pitch in inches, propeller speed in revolutions per minute, boat speed and percentage of slip. If any three of these factors are known (or assumed), the fourth can be determined at a glance from the Speed-Slip Calculator.

Copies are being mailed to all naval architects and boat builders. Individuals can purchase copies at the production cost of 25c each, either from their local Graymarine dealer or distributor, or by writing directly to the Gray Marine Motor Company, 710 Canton Ave., Detroit 26, Michigan.

New Radiomarine Produc

A new portable direction find the Golden Guide, is a self containe compact instrument, with a gold to front panel put out by the Radio rine Corporation of America, a Se ice of RCA.

The Golden Guide is a combinati radio direction finder, marine rad telephone receiver, and broadc receiver which can be operated fr its self contained battery pack or 1 volt AC-DC line current.



V-Drive Power Package

A new approach in inboard mari power which entirely frees boat co pit and cabin of engine is announc by Universal Motor Company, O kosh, Wisconsin. This is a new ty V-Drive with the gear drive co ponent mounted integrally with engine.

This is claimed to result in rema able savings in installation deman permitting the engine to be mount at the extreme stern of the bo requiring little more space than th which normally would be aft de In boats with transom wells or tra som extensions, this area usually ample for the inboard power pa age and enables owners of sm boats to go inboard.

The manufacturer stresses the sm size, light weight, and quiet operati of this V-Drive . . . the 25 hor power Atomic Four or the 65 h Unimite Four. Both models offe complete power package includi everything necessary for installati except propeller, strut and shaft. provides push button starting and a full electrical system with am current for navigation and ca lights.

Complete literature from Univer Motor Company, 535 Universal D Oshkosh, Wisconsin.

TIDES OF THE INDUSTRY

New G-M Diesels

The first General Motors turbo-harged 2-cycle "V" type Diesel ngine has been announced by the Cleveland Diesel Engine Division of General Motors. This engine is par-icularly designed to meet the in-reased horsepower by the marine nd industrial markets. This engine vill be seen for the first time at the General Motors Powerama in Chi-ago, August 31 through September 5. It is a result of intensive devel-opment and refinement of Cleve-and's Diesel's 2-cycle engines. This new engine which has a bore of 8¾" nd a stroke of 10½", will develop 75 brake horsepower per cylinder nd is available in 6, 8, 12, and 16-ylinder sizes.

Nylon and Plastic Film

A line of tarpaulins and coverings of all shapes and sizes, plus a com-plete line of tents, is made from a new light-weight material which in-corporates the use of nylon and vinyl plastic film. Among its many features is exceptional tear strength, complete nd easy to store, water-proof, rot nd mildew-proof, with sun-fast col-ors. This material has met most rigid specifications of the armed services. All seams are electronically welded nd sewn.

This seal is expected to revolution-ize the tent and tarpaulin industries. Full information on the "Nyvel" line from Strength, Inc., James Street, Somerton, N. J.

Nylon Net Mending Needles

Net mending needles made of pure nylon are being marketed under the trade name of Flexso-Nylon for the commercial fishing industry.

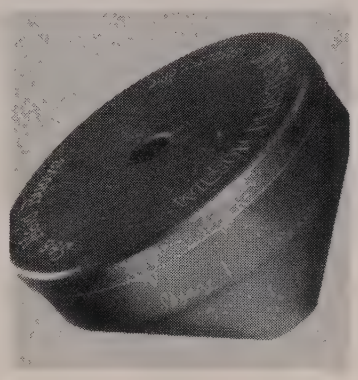
Flexso-Nylon mending needles are similar in design to conventional needles used by fishermen for many years, but are lightweight for easy handling and speed in use. They are said to be practically unbreakable, will not warp, unaffected by oil, tar, heat or solvents.

Available in medium and large sizes to meet every fisherman's twine mending needs. Information, prices, and samples may be obtained by writing to the J. H. Shepherd Son & Co., 1820 East Ave., Elyria, Ohio.

Sardine Estimates

Forecasting the 1955-56 sar-dine season, which began in August, the Marine Research Committee estimated that about 300,000 tons of adult fish will be available for the commer-cial catch, of which about 150,-000 tons could be caught. This figure is about the same as last season, although strikes and market conditions held the 1954-55 catch to about 67,000 tons.

It was unanimously agreed by the Committee that the sar-dines off Southern California last season were fish which had formerly spawned in Mexican waters. A larger percentage of the total spawn was off south-ern California in 1954 than during the previous year.



Fiber Glass Buoy

A new fiber glass fishing float and channel marker, known as the "Sea Maid" Buoy, is said to be decay and corrosion resistant, and impact re-sistant. According to the manufac-turer, it will last indefinitely without requiring maintenance of any kind. Bright, non-fading, molded-in colors are said to make the float easily vis-ible from a considerable distance.

The "Sea Maid" Buoy is designed in the form of a cone, with a cylin-drical hole running through its center from top to bottom. A pipe, which fits into the hole, attaches to an anchoring device. Write for informa-tion to Wilson Plastics, Inc., San-dusky, Ohio.

Orme Lewis Leaves FWS

Assistant Secretary Orme Lewis will leave the Department of the In-terior on September 15 to return to the practice of law in Phoenix, Ari-zona. He was appointed to his In-terior post by the President in Feb-ruary 1953.

Besides supervising several Interior bureaus, Mr. Lewis was active in FWS and served as a U.S. represen-tative at the GATT conference in Geneva which considered tariffs.

Galvanizing Repair Stick

A new and improved metal alloy stick called ReGalv is now available for regalvanizing any area where the zinc coating (of galvanized sheets, shapes, fittings, etc.) has been dam-aged or destroyed by welding, flame-cutting, bending, or the like.

The regalvanizing metal stick is said not to crumble, and therefore may merely be rubbed over the weld or other hot surface to be recoated. It melts and bonds at temperatures as low as 600 degrees F.

The ReGalv metal coating is said to be equally tough, resistant to cor-rosion, and firmly adherent as the original galvanizing. Manufactured by RotoMetals, 980 Harrison Street, San Francisco 7, Calif.

Fiberglas Hull

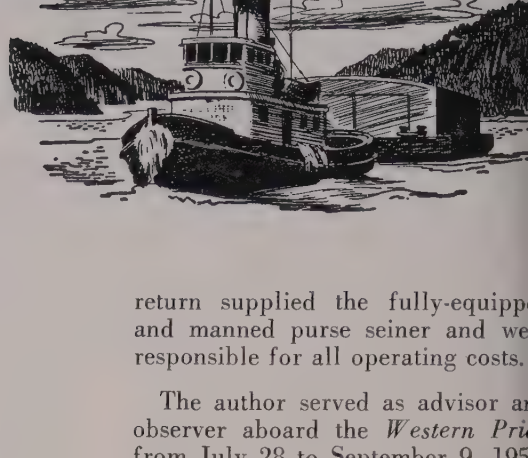
The "Crystalina," 38-foot cabin cruiser recently launched at Newport Beach, California, sports a new kind of hull construction that combines the luxurious look of mahogany with the permanent water and weather pro-tection of resin-bonded Fiberglas.

The cruiser's double-planked hull has a unique outer layer of mahog-any plywood strips over which has been laminated a tough, watertight coating of Fiberglas and resin. The resin "wets out" the glass cloth to invisibility, forming a transparent, glossy, reinforced sheathing over the rich mahogany-red hull.

The "Crystalina" was designed and built by John Norek, Newport Beach, under commission to T. E. Thal, Inc., Los Angeles, which has pioneered a number of Fiberglas developments, notably in the marine field. Fiberglas molding and laminates were done by Richard Williams, Newport Beach.

Gulf of Maine

BLUEFIN TUNA Exploration



By J. J. MURRAY

THE California purse seiner *Western Pride* operated in the New England bluefin tuna fishery from July 28 to September 9, 1954, in a cooperative agreement with the U.S. Fish and Wildlife Service.

Mechanical difficulties, encountered while preparing the seiner for the trip from California to New England, forced postponement of the original departure date and resulted in curtailment of effective fishing time.

Fishing activities were conducted in the Cape Cod-South Channel area between 41° 38′-42° 08′ north latitude and 68° 30′-70° 00′ west longitude. Best fishing areas were found 40 nautical miles east southeast of Buoy "R6" of Chatham, Mass., and 10 nautical miles northeast of Race Point, Mass.

A total of 10 purse-seine sets was completed with a catch of 48 tons of bluefin tuna averaging between 30 and 40 pounds of fish. Best fishing occurred on August 21 and 22 when four sets in the South Channel netted 32 tons of fish. Tuna schools were sighted on 13 of the 26 days at sea. Sizes of schools observed were estimated from 2 to 200 tons with the majority of schools in the 10- and 20-ton class. It was conservatively estimated that over 1,000 tons of tuna were sighted.

Weather conditions prior to hurricane "Carol" on August 31 were generally favorable (with the exception of a few days) for purse-seine fishing, with adverse weather prevailing during the period from September 8 to 18, immediately preceding and following hurricane "Edna" on September 11. Surface water temperatures recorded during August in the vicinity of the fishing grounds ranged from 59° to 65° F.

Considering the short period of fishing time and the unusual weather, the catch of nearly 50 tons of tuna, plus the large number of tuna schools which were seen is encouraging for commercial utilization of New England tuna, especially if marketing conditions improve for the fishermen.

Background

Exploratory fishing for bluefin tuna (*Thunnus thynnus*) in the Gulf of Maine and adjacent waters has been conducted since 1951 by the Exploratory Fishing and Gear Development Section of the U.S. Fish and Wildlife Service. Major objective of the program has been to evaluate the potentiality of this resource and determine the possibility of developing a commercial tuna fishery and canning industry in the region.

The tuna purse seiner *Western Explorer*, chartered for the initial work during 1951, completed eight trips with a total catch of 90 tons of tuna (Murray 1952). Operations were continued in 1952 and 1953 using Japanese-style tuna long-line gear as the principal fishing method. While total production resulting from long-line fishing was low, valuable information relative to locations of tuna schools, extent of range, and oceanographic and meteorological conditions affecting the general availability of the tunas was gathered (Murray 1953 and 1954).

In a cooperative agreement with the owners of the California tuna purse seiner M/V *Western Pride*, the Service continued to promote commercial development of this fishery during the 1954 season. Tuna-fishing equipment of the Service, consisting of a tuna purse seine, seine skiff, and accessory gear was made available to the vessel operators, who in return supplied the fully-equipp and manned purse seiner and we responsible for all operating costs.

The author served as advisor a observer aboard the *Western Pri* from July 28 to September 9, 195 and participated in the scouting a fishing activities for bluefin tuna the Gulf of Maine and adjace waters.

Vessel and Fishing Equipment

The M/V *Western Pride*, a Pacif Coast tuna purse seiner active f many years in the California tu and pilchard fisheries, departed fro San Pedro, Calif., late in June 195 and stopped at Pascagoula, Mis where a tuna seine, seine skiff, a accessory gear were taken on boa before continuing on to New En land waters, arriving off Cape C on August 1. Registered measur ments of the vessel were: length 71 ft.; beam, 20.4 ft.; depth 10.6 f tonnage 118 gross tons. The vess was powered by a 200-horsepow Diesel engine equipped with a pow take-off unit for operation of t purse-seine winch located on de aft of the deckhouse. Natural ice w carried for preserving the fish catc with an auxiliary refrigeration u to maintain fish-hold temperatures approximately 25° F. Fish-hold c pacity was rated at 95 tons.

A standard Pacific Coast-type tu purse seine, measuring 377 fathor in length and 32 fathoms in dept stretched-mesh measure, was e ployed. The body of the seine co sisted of five horizontal stripes linen webbing (numbers 36 a 40/16), 4¼-inches stretched mes each strip approximately 377 fat oms in length and 100 meshes dee A corp-line strip, 8 meshes deep, No. 60-thread medium-laid cott seine twine was laced to the top st of webbing. The lead-line strip, lac to the bottom webbing strip, was N 65/12 linen thread, 50 meshes dee and 8-inches stretched mesh.

A heavy, flat-bottom seine ski measuring 26 feet in length and

Mr. Murray is Specialist in Fishery Methods and Equipment, Exploratory Fishing and Gear Development Section, Branch of Commercial Fisheries, U.S. Fish and Wildlife Service, East Boston, Mass.

: in width, equipped with a 100-sepower gasoline engine was used assist in fishing operations.

uting and Fishing Results

Trip No. 1 (July 28-August 12, 54): The *Western Pride* departed m Cape May, N. J., en route from ifornia, on July 28 and arrived off atham, Mass., in August. Fishing its operating in this area had re-ted the presence of tuna schools ring the preceding week. Scouting erations during the next four days closed many small schools of tuna ending from Pollock Rip Light-p north to Cape Cod Light—a dis-ce of 28 nautical miles. Because of wild and erratic actions of the ools it was not possible to make y purse-seine sets during this pe-d. On August 7 a school of tuna, imated to contain five tons of fish, s sighted 15 miles southeast of Nau- Light. The seiner went into the , encircled the school perfectly, t lost it when the fish sounded and caped from the seine before purs-g could be completed. The follow-g day the vessel proceeded off-ore in a southeasterly direction ere, just before sundown, large hools of tuna were sighted approxi-ately 40 to 50 nautical miles south-st of Cape Cod. The second set, on ugust 9, was unsuccessful, when a -ton school escaped from the seine nen the cork line became fouled, using an excessive delay in closing e purse line. Large schools of tuna ere sighted in the South Channel gion on the afternoon of August). At one time five schools esti-ated to contain from 20 to 50 tons ch were surfaced within a radius of o miles of the vessel. Weather con-tions were poor with heavy seas d winds of 25 knots. Shortly before ndown when the winds and seas oderated, a set was completed and e purse rings were brought on deck ith an estimated catch of 80 tons of na in the seine.

Soon after pursing the winds in-eased to near-gale force accom-anied by heavy seas. Attempts split the seine and divide the hool into two sections failed due to e excessive rolling of the ship and sulted in tearing the webbing along e cork-line strip, allowing most of e tuna to escape. The seine was nally retrieved 15 hours after set-ng with a catch of three tons of fish at were gilled in the webbing. Ex-nsive damage to the seine and deck ear necessitated a return to port and loss of eight days' fishing time hile the equipment was repaired.

Trip No. 2 (August 20-26, 1954): The *Western Pride* sailed from Gloucester on August 20, completed five successful sets in the South Channel fishing grounds, approximately 40 nautical miles southeast of Cape Cod Light, and returned to port on August 26 with a catch of 44.5 tons of bluefin tuna.

Large schools of tuna were sighted within 80 nautical miles of Gloucester. Many of the schools were estimated to contain from 100 to 200 tons of fish, much too large for impounding with the purse seine and equipment available on the *Western Pride*. Small scattered schools were also found and the first set of the trip on August 21 produced a catch of two tons, averaging from 40 to 45 pounds in weight. A second set made later the same day on a school estimated to contain 15 tons of tuna proved unsuccessful. Shortly after sunrise on the following day tuna schools were again sighted and an early morning set caught 10 tons. A few hours before sunset the second successful set of the day was made on a "breezing" school of about 20 tons. After eight hours of work the seine was back on the turntable and the 20 tons of fish had been brailed into the ship's hold. Scouting operations on August 23 did not start until noon, when tuna schools estimated to contain an aggregate of 1,000 tons of tuna were sighted. Attempts to divide the fish into smaller groups by steaming through the middle of the schools were unsuccessful. Small groups of fish would separate briefly and then rejoin the main school. For three hours the seiner remained in contact with the schools, until they disappeared at dusk, without being able to make a set. High winds and rough seas prevented fishing on the following day, although tuna schools were still observed surfacing over a wide area. On August 25 activities were transferred to the inshore waters between Nauset and Cape Cod Light. Behavior of the schools observed there differed markedly from those further offshore. Inshore fish were generally found in small schools milling and moving erratically and presenting difficult targets for purse seining. Two sets were completed in the area netting a total catch of 12.5 tons of tuna. Average weight of the fish caught in this area was 25 pounds. The trip was unloaded at Gloucester on August 27 and 28.

Trip No. 3 (August 28-September 9, 1954): During this period one severe hurricane and the advent of another drastically curtailed fishing and resulted in the loss of the seine skiff and brought a halt to the seining program. On August 30 the *Western Pride* scouted the inshore of Cape Cod waters and found small bunches of tuna. The fish were extremely wild and no sets were possible. Anchorage in Provincetown Harbor was made late that evening. Hurricane "Carol" struck on the morning of August 31 and efforts to keep the vessel from being driven aground were finally rewarded when the storm abated late in the day. Loss of the seine skiff, which floundered during the gale, delayed resumption of fishing while search was made for the missing skiff. The search proved fruitless and loan of a menhaden seine skiff was effected on September 6 and the vessel proceeded offshore to the South Channel. A sharp drop in surface-water temperatures was noted following the hurricane and no large schools of tuna were found in this previously productive area.

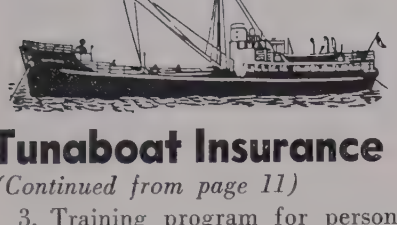
Behavior of the smaller-size schools observed resembled actions of the schools in the vicinity of Cape Cod that were sighted on the preceding trip.

A set on September 7 caught 24 fish with a total weight of 1,000 pounds. Evidently the main body of fish had moved further offshore as trawlers fishing on the Northern Edge of Georges Bank, about 40 miles northeast of the South Channel position of the seiner, reported sighting huge schools of tuna in the area. Efforts to reach this position were abandoned when hurricane "Edna" moved up the Atlantic Coast. On September 8 the *Western Pride* docked at Gloucester completing the final trip of the 1954 season. ★

Freezing Plants in Mexico

The Mexican Navy Department reportedly is well satisfied with results of the Veracruz fish-freezing plant and will construct three additional plants in Ciudad del Carmen, Campeche; Mazatlan, Sinaloa; and Guaymas, Sonora. There is some talk of still another plant in Tampico or Tuxpan. The Veracruz plant has a capacity for 20,000 metric tons of fish daily, but capacities of the projected plants has not yet been announced.

Freezing-plant capacity in Mexico has been very limited and there is great need for such plants, with Government agencies now taking active part.



Tunaboat Insurance

(Continued from page 11)

3. Training program for personnel: Vessel owners and crews should develop cooperatively some kind of practical group-study or discussion meetings designed to improve skills in seamanship, use of instruments, the handling and maintenance of power equipment, safety methods, proper radio procedures, etc.

Limitation on Claims

4. A federal law limiting claims for each accident should be enacted. A ceiling on amounts for death and injuries should be fixed by statute. A suggestive analogy pointed to is what has been done in the field of Workmen's Compensation covering occupational illness and injuries on land.

5. The insurance companies should inspect and classify fishing vessels for the purpose of rate fixing in accordance with type, age, physical characteristics, etc. The insurance companies should consider the possibilities of consolidating the experience of the separate insurance companies and of making it public; of developing some plan of analytic or statistical rating, based on a classification plan or register of rates.

6. Both insurance companies and vessel owners should expand the use of policies with deductibles, so that insurance companies will not be burdened with a multiplicity of small claims.

Offer Rate Inducements

7. Insurance companies should insist on an agreed adequate standard of safety before insuring. The insurance companies should offer inducements by lower rates on a risk where it is above the average and demand higher rates where it is below the average. This would provide a dollar incentive to observe good standards of construction and to train crews to guard the safety of vessels. Once a vessel owner gives concrete evidence that he is trying to improve the conditions of the risk, the insurance companies should aid him actively in this effort. The insurance companies should not feel that they are fully carrying out their role in cases where, having asked for and received a sufficiently high premium, they remain passive thereafter, insofar as engineering the risk is concerned.

Explain Obligations

2. Insurance companies should publish a pamphlet in all needed languages explaining in simple fashion what the obligations of the insurance companies are to the insured vessel owner and of the insured vessel owner to the insurance company. Such a pamphlet should point out the limiting terms and conditions of the policy and what these terms and conditions mean in terms of actions on the part of the vessel owner and crew. Obviously, an insurance company does not always know for what it may later find itself liable. But certainly the well-established factual precedents can be brought to the attention of vessel owners and crews.

9. Insurance companies should make available periodically to fishing vessel owners a list of percentage differences in insurance premium rates for varying types of fishing vessels and also for somewhat comparable commercial vessels outside the fishing industry, to arouse the owner's interest in the possibilities of getting better rates through better maintenance and few losses. The brokers, particularly, would have to cooperate, since they play so large a part in the fixing of the agreed rate in so many cases.

Cooperative Commission

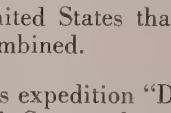
10. A suggestion has been made for the setting up of a Commission to examine the whole insurance question, comprehensively and systematically, and to prepare a report with findings and recommendations. On this Commission there should be representatives of the fishermen, the vessel owners, the banker-mortgagees, the insurance brokers and the insurance companies. Such a Commission should strive to bring about an integrated approach to the insurance problem, with continuing long-range objectives. One of my impressions is that there has been neither an integrated nor a steady persistent attention over the years to the insurance problem. The insurance problem should not be heard about just during critical stages in which the fishing industry may find itself; that is to say, the Commission should try to create a framework for dealing with the problem that will do away with what had apparently thus far been a crisis approach. This Commission should work for a unity of purpose now absent, a unity among the various groups, fishermen, vessel owners, brokers and insurance companies. *

Boat Insurance Survey

A nationwide survey aimed at bringing about lower insurance rates for domestic fishing craft by reducing losses was announced recently by Secretary of the Interior Douglas McKay.

The survey will be conducted by Boston University's Bureau of Business Research under the supervision of the Fish and Wildlife Service. It is the latest in a series of projects made possible by the Saltonstall-Kennedy Act — designed to aid the American fishing industry through research and development.

Preliminary work is now under way by virtue of a government contract whereby $50,000 was made available to the university on June 30 for operations to extend over a period of 18 months. Personal interviews with insurance people will reveal premium incomes, claim payments, expenses, and profit or loss. Interviews with vessel owners will bring forth information on loss experiences.



Antarctic Expedition

When Rear Admiral Richard Byrd's new expedition to the Antarctic shoves off next November, it will be equipped with crawler tractors to help establish three observation sites for scientific studies.

Announced a month ago, this is the second expedition to the South Pole with Admiral Byrd as officer in charge. His efforts have resulted in discovery of more of the Antarctic for the United States than all other nations combined.

With this expedition "Deepfreeze" the United States plans to set up three stations—with other countries establishing other stations on or near the Antarctic continent—for co-ordinated observations in such sciences as meteorology, glaciology, geomagnetism and cosmic rays. The tractors are specially manufactured Caterpillars for operation in temperatures to minus 65 degrees.

alifornia Receipts crease

Landings of commercially caught h and shellfish at California ports ring February 1955 amounted to 6 million pounds, compared with 3 million pounds reported for the responding month of last year, ac- ding to reports recently released the U.S. Fish and Wildlife Service cooperation with the California partment of Fish and Game, Ma- e Fisheries Branch. This represents decline of 22%.

Of the 20.6 million pounds re- rted for February 1955, 19.4 mil- n pounds (94%) consisted of fin- h items, with shellfish products aking up 1.2 million pounds, or %. Receipts of domestically-caught na and tunalike fishes (9.0 million unds), accounted for 47% of the al finfish landings. After the tuna oup, species of major importance nded during the month were an- ovies (4.6 million pounds), jack ackerel (1.3 million pounds), rock- shes (1.2 million pounds), and Pa- ic mackerel (1.0 million pounds). cluding the tuna catch, these species counted for 83% of the total State oduction for the month.

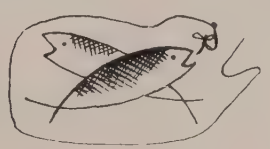
Total landings for the two-month riod ending with February 1955 nounted to 46.5 million pounds, mpared with 63.7 million pounds nded during the same period of st year. This represents a decrease 27%. During the first two months the current year, finfish made up 5% of the total catch, with shellfish ems accounting for the remaining %. Total tuna receipts for the first o months of the current year nounted to 24.0 million pounds, mpared with 43.2 million pounds these species during the corres- nding period of last year, a de- ease of 44%.

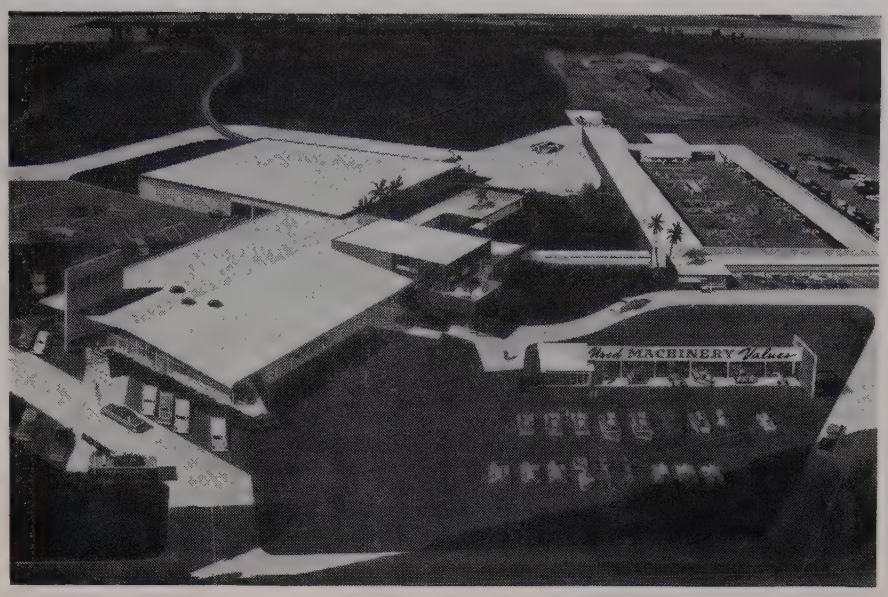
ompetitive Price Levels

The Fisheries Association of Brit- h Columbia pointed out the selling stacles which will arise on world arkets should prices be increased to e consumer. He felt that the opera- rs had given a true and compre- ensive picture of the threat to mar- ts from intensified Japanese com- etition and other fish products and ted letters from brokers to verify ese facts. While dealing mostly with lmon, the main points apply equal- well to tuna and other types of sh.

The efforts made by the industry cope with competition and to broaden the markets were something to be preserved and not jeopardized. The expanded markets and the steady flow of canned salmon to those markets and the consequent decrease in distress selling merited a small increase in prices paid fishermen, but the Industry couldn't see that a further increase could be justified if the welfare of the whole industry was to be considered.

The likelihood of lower meat prices in both Canada and the U.S. was being forecast by authoritative sources, and domestic canned salmon could not stand a price rise if it hoped to compete with other protein foods.





New Shepherd Marine Location

Shepherd Marine, division of Shepherd Machinery Co., Los Angeles, dealer for Caterpillar diesel engines, Universal Marine, Bendix Depth Recorders, R.C.A. Radio Telephone, Wood Freeman Metal Marine Pilot, Kaar Radiomarine, and other Marine supplies announces new Los Angeles headquarters.

Located in Eastern Los Angeles at 3400 on the new San Gabriel River Parkway, Shepherd Marine headquarters are being incorporated in the nation's largest machinery facility with 117,600 square feet of enclosed floor space on a 32½ acre site, and will be in operation by September 16, 1955.

From the new location, with its easy access to the greater Los Angeles and Harbor Freeway systems, Shepherd Marine will supply Marine parts and service to any point in the Long Beach - Los Angeles Harbor Areas in less than one-half hour enroute time.

Shepherd Marine's former Los Angeles Harbor facilities at 2240 South Miner were moved August 13 to the Los Angeles store at Atlantic and Bandini Blvds., where parts and service will be supplied until the new facilities are in operation.

Seven League Books

The "Public Library of the High Seas," sponsored by the American Merchant Marine Library Association, provides the only sea-going library service to the men who go to sea in ships.

Since the future of the American Merchant Marine Library Association depends on the continued support of its many loyal friends, donations of books should be sent to the nearest port offices which are located at: 105 Embarcadero, San Francisco 11, Calif.; 820 South Beacon St., San Pedro, Calif.; 3415 East Marginal Way, Seattle 4, Wash.

The American Merchant Marine Library Association is a non-profit organization, with its officers serving without remuneration. Contributions made to it are income tax deductible, and those interested should write the Association at 45 Broadway, New York 6, New York.

Where Are the Fish?

(Continued from page 9)

ally tossed overboard to hold the school around the boat.

In exceptional years fish are caught from May through January. Typically, the fishery buds in June, develops very rapidly in July, is in full bloom by August and September, wanes during October and November and finally dies in December.

In general, since 1950, a small number of vessels commence scouting for albacore about the middle of June and usually succeed in catching a few fish from the early part of the run. By early July vessels operating from Los Angeles Harbor and San Diego have scouted the region fairly well from southern Baja California to Point Conception and have located areas where concentrations of fish occur.

Vessels subsequently leaving port troll out to these known areas of fish. Meanwhile a number of vessels from Oregon and Washington, some of which have been fishing for salmon, start migrating southward to participate in the albacore fishery. These vessels scout for albacore on the way down.

By the latter part of July areas of abundance of albacore are being heavily fished. At this time the fishing fleet will be concentrated in a few relatively small localities. In the evenings when the vessels turn on their lights to drift on the fishing grounds an enchanting scene is created reminiscent of a large city at night, tempting the observer to step over the side of the boat and walk down the street. Among the boats in each fishing area there are always some more adventurous than others. They leave the fleet and scout different localities hoping to improve their luck.

During August and September when the fishery is well developed the schools of albacore appear to be spread out over most of the southern fishing grounds and the fleet has resolved itself into smaller units to encompass these newly located concentrations of fish. These units maintain radio contact with each other and a frequent interchange of vessels between areas results.

As the season progresses the southern areas become less productive and the bulk of this heterogeneous mass of incessantly moving, scouting, working, hoping, sweating fishermen moves northward up the coast. By November the fish are scattered over a large area with small sporadic catches being made from Baja California to San Francisco. In December the majority of the fish are caught north of Point Conception.

Sources of Information

During the 1951, 1952, and 1953 seasons scientific personnel contacted albacore boats at their ports of landing and interviewed the fishermen to gather data concerning the catches.

The vessel name, Fish and Game number, departure date, return date, and general area of each catch were recorded. The 1951 interviews were obtained at Los Angeles Harbor, in 1952 at Los Angeles Harbor and San Diego and in 1953 at all the major ports of landing from San Diego to San Francisco.

When a load of fish is sold, the buyers are required by law to fill out a receipt in triplicate showing the date, vessel name, Fish and Game number plus exact pounds landed and to send the third copy to the Department of Fish and Game. From these receipts a complete record of the pounds landed by each vessel after every trip is obtained. Information from interviews with the fishermen and from the fish receipts furnished the basis for this report.

As a basis for summarizing albacore catch data, and to permit comparisons between months and years, the Eastern Pacific Ocean was divided into five-degree squares. Each large square was designated by the latitude and longitude of its southeast corner and further subdivided into 25 one-degree squares.

In 1951 from interviews with fishermen unloading at Los Angeles Harbor the location of catch was obtained. Since boats unloading at San Diego catch fish in essentially the same areas, the Los Angeles Harbor interviews were assumed to represent the catch localities for landings in both ports.

During 1951, 74.6% of the albacore landed in the state was delivered to these two ports. In 1952 fishermen were interviewed both at Los Angeles Harbor and at San Dieg These two ports received 71.8% the fish landed in the state.

In 1953 interviews at all the maj California ports from San Francis to San Diego gave information abo 99.2% of all fish landed. The inte view samples taken at the ports landing during any month were a sumed to be representative of t activities of the fleet for that mon and port.

Summary and Conclusions

The vast majority of albaco landed in California since 1950 w caught during July, August, and Se tember between latitude 26° nor and latitude 36° north from the coa out to longitude 125° west.

During June and July, 1951, mo of the fish were captured relative near shore within 150 miles. In Au ust and September the off-shore ar (outside 150 miles) increased mar edly in importance. In October a November small catches were ma north of Point Conception in t Monterey-San Francisco area.

The inshore area was again t most productive during June a July 1952, but an offshore trend ha developed in July. By August th area had become almost as importa as the inshore area. From Septemb on, however, the inshore area w once again dominant.

During June, 1953, the inshore ar was the most important, but the of shore trend had already become a parent. By July this offshore tre was very important while the insho area was less productive. In Augu and September the offshore area w the most productive except for t heavy catches made in two localiti north of Point Conception duri September.

Each year as the season progress the fishery tends to move northwa up the coast and offshore. By Nove ber most of the fish are taken nor of Los Angeles Harbor.

Since 1950 the fishery has grad ally shifted offshore. This tre started in August, 1951, and by Au ust, 1953, the offshort area was t most productive.

PORT FROM WASHINGTON

(Continued from page 8)

eting on August 25 and 26 at the Hotel Statler in Boston. Among those resent was the tuna industry's representative Donald P. Loker of Star-st, Terminal Island, Calif.

Main objective of the meetings was to outline new fishery research d development projects to be initiated nationwide during fiscal year 56. Progress made in projects begun during the past fiscal year were viewed and evaluated. Some of the major projects already undertaken th funds made available by the Saltonstall-Kennedy Act are:

Development of voluntary Federal grades and standards for fishery products.

Development of a chemical test as a measure of the nutritive value of fish meal.

Development of new uses for fish oils.

Exploration of deep water fishing grounds in the North Atlantic.

Research on fluctuation of the California sardine.

Study of causes and control of toxic red tide off the Florida coast.

Two joint industry-Government sales promotion campaigns were conducted to move into trade channels excessive stocks of haddock and canned tuna. Both were highly successful, and probably will lead to other such efforts.

--o--

NTERNATIONAL FOOD FAIR.--There will sales promotion campaigns were conologne, Germany, from October 1 to October 9. The U.S. exhibit is sponored jointly by domestic trade groups and the United States Department f Agriculture and is to assist sales promotion of U.S. food and related roducts abroad. The exhibit is open to participation by private exhibitrs, including fishery firms, interested in developing new markets overeas. The U.S. Department of Agriculture will provide space and organize he exhibit.

The fair is held every two years and visitors come from all parts f the Continent. At least 14 other countries in Europe and South and entral America are arranging exhibits at this fair.

--o--

ERRITORIAL WATERS.--The State Department has announced that "Represenatives of the governments of Chile, Ecuador, Peru and the U.S. will meet n Santiago, Chile, on September 14 for the purpose of holding conversaions regarding the conservation of fishery resources of waters of the outh Pacific, and to plan appropriate scientific and technical studies o that end." One subject will be the 200-mile maritime zone claimed by the hree Latin-American countries.

--o--

APAN SALMON INCREASE.--Japan's salmon catch this year has broken all ostwar records. As of August 10, the 1955 Japanese high seas salmon atch has passed the 61,000,000 fish mark. This was reported to include 1,611,151 Sockeyes, 20,958,235 Chums, 26,079,095 Pinks, 2,570,572 ohoes, and 194,268 Kings.

Final figures for the season, which ends about August 31, will

probably be about 65,000,000, according to a dispatch from the U.S. Embassy in Tokyo. This compares with last year's catch of 20,493,645 fish and the preliminary estimate for this year's catch of 47,590,000 fish

The original estimate of production of the floating salmon canneries was 1,000,000 cases (96.8 oz. cans) but it now appears that production will reach at least 1,250,000 cases, plus some 200,000 cases canned by shore canneries. Total production for 1954 was about 700,000 cases

In an effort to prevent this year's greatly increased production from wreaking havoc with salmon price levels, the nine companies controlling most of Japan's canned salmon have organized an export control agency to be termed the Japan Salmon and Trout-Salmon Export Marine Industry Association. Its main task will be to fix prices, adjust sales volume, and arrange financing for companies which would otherwise have t dispose of stocks at sacrifice prices.

--o--

U.S.-ECUADOR TRADE AGREEMENT.--Steps are being taken to change the termination date of the 1938 bilateral trade agreement with Ecuador from July 18, 1955, as had previously been announced, to January 18, 1956. This does not constitute a reversal of the decision to end the trade agreement, but is only a postponement, says a State Department release.

This action will not change the present rate of import duty on canned sardines applied by Ecuador, which was established January 1, 1954 at 6 sucres per net kilogram. The trade agreement rate on canned sardines which was .49 sucres per legal kilogram under the 1938 agreement, has not been effective in recent years due to the imposition by Ecuador of exchange surcharges and increased rates of duty.

--o--

STATE DEPARTMENT ASSISTANCE.--Representatives of the domestic tuna industry recently met with the government officials at the State Department to discuss whether to invite the Japanese tuna industry to join in an advertising and promotion campaign for the sale of canned tuna in this country.

The proposal for such a campaign was made recently in a letter from Jack Martin, White House aide, to Senator Kuchel (Calif.). The Senator had written the White House to urge that the Executive Branch exten aid to the domestic tuna industry.

Mr. Martin wrote that the State Department was prepared to suggest to the Japanese that they participate in an advertising and promotion program--if the domestic tuna industry would agree to hold a meeting with the Japanese to discuss such a program. It was explained that the government was unable to take part in the talks, but willing to arrange meetings for any domestic industry group that seeks to talk over trade problems with foreign competitors.

--o--

GENERAL AGREEMENT ON TARIFFS AND TRADE.--More than two-thirds of the contracting parties to the General Agreement on Tariffs and Trade cast favorable votes on accession of Japan, and Japan therefore will become a contracting party on September 10.

hery Imports Climb a New High

mports of edible fishery products the United States during 1954 ounted to 803 million pounds, ued at 204 million dollars—both records, according to figures is- d recently by the Fish and Wild- Service. Among the more impor- items received in much greater ume than in 1953 were frozen sal- n, fresh sea herring, and fresh frozen tuna and groundfish fil- ; and canned bonito and yellow- .

mports of nonedible fishery prod- s in 1954 totaled 48.7 million dol- s—approximately 1 million dol- s less than the value of these orts last year.

Exports of edible fishery products 1954 amounted to nearly 63 mil- n pounds, valued at 16 million lars; and nonedible products, val- l at 15.3 million dollars. Exports ring 1954 totaled 69 million unds of edible items, valued at 17 llion dollars and nonedible items rth 10.8 million dollars.

Exports of canned fish and shell- h decreased from 57.5 million unds in 1953 to 49 million pounds in 1954, while those of fish oil amounted to 142 million pounds, an increase of 30% compared with the previous year.

Tagged Tuna Recoveries

The efforts of fishery researchers and commercial fishermen to trace the migrations of Hawaii's skipjack (aku) schools have begun to bear fruit with the recapture of two tagged tuna near Lanai on July 12, according to an announcement by Dr. A. L. Tester, director of the Pacific Oceanic Fishery Investigations.

The fish, which were caught by the sampan *Olympic*, had been marked and released by Service scientists aboard the research vessel *Charles H. Gilbert* in the same area on June 1 and 8 of this year. At the time of tagging, the two skipjack were in different schools, both composed of fish weighing about seven pounds. During the period from May 30 to June 8, a total of 207 aku were tagged in the Lanai area.

Although these recaptures do not provide any evidence of spectacular migrations, but indicate rather that the schools of small skipjack are comparatively stationary at this season, they do give encouraging indications that the fish can survive the handling necessary for tagging and the encumbrance of a vinyl plastic tube threaded under the skin of their backs behind the dorsal fin. This type of tag, developed and widely used by the State of California, has made some astounding records on other species of tuna, as for example in the case of an albacore marked in September, 1954, off the California coast and recaptured in Japanese waters in April, 1955.

There is now a total of 1,799 tuna of various species which (POFI scientists hope) are swimming about the Pacific trailing plastic tubing inscribed with a Honolulu return address. They include 80 albacore, 73 bigeye, 621 yellowfin, 1 kawakawa (little tunny), and 1,024 skipjack. The program is continuing, with 121 more aku tagged in two days aboard the *Gilbert* recently, and with additional tagging on July 7 aboard the commercial fishing sampan *Venus*. Fishermen have been informed by means of posters and press releases to be on the lookout for tagged fish.

SEACORD'S

Pump & Injector

SERVICE

"All Makes"

SALES

AMERICAN BOSCH
BENDIX SCINTILLA
ADECO FUEL PRODUCTS
TROJAN BATTERIES

BElmont 4-1454

1337 India Street

San Diego 1 California

Reprints

DID YOU LIKE YOUR AD THIS MONTH?

Why not have a reprint made for your own use!

1000 Copies, one color.....$12.00
Additional 1000.....$ 7.50

PRINTED ON 60 LB. ENAMEL PAPER

Multiple Color Ad Rates on Request

(These prices if order received by 15th of month)

McINNIS PRINTING & PUBLISHING

127 South Olive Street ORANGE, CALIFORNIA Phone 287

The GLOBE

An International News File Compiled from FOREIGN REPORTS

American Samoa.—The tuna cannery at Pago Pago, Eastern Samoa, operated by a United States west coast tuna packer, is to be modernized and its processing capacity increased, say reports from the Pacific Islands.

Principal technical difficulty is the limited reserve fish-holding capacity of the factory—about 200 tons. This means that tuna sometimes have to be wasted if large hauls are brought in by the Japanese boats. The cannery cannot keep pace with the fishing, and all holding room is fully taxed. During the peak operation the cannery is now employing 250 Samoans.

Great Britain.—Fish of different sizes may be identified eventually with one sounding, and it may then be possible to estimate the number of identified fish within one sounding. This is one of the conclusions reached by scientific officers of the British Ministry of Agriculture and Fisheries, in a report on experiments at a depth of 35 fathoms to discover new methods of echo-sounder identification. They used rubber balloons, which simulated the air bladders of fish (which provide most of the signals showing the whereabout of large shoals of fish).

Japan.—"Fish apartment houses" is the term used to describe the hollow concrete blocks which the Hyogo Prefectural Government is lowering to the bottom of Japan's Inland Sea in a move to increase the fish population and thus help commercial fishing. The Inland Sea fishing grounds are an important source of food for southern Japan, but have never fully recovered from the serious depletion caused by the intensive wartime fishing.

The concrete forms will afford shelter for bottom fish and a breeding ground for plankton and other marine life on which fish feed. The blocks, 4x4x5½ feet, have windowlike openings on all sides and top, and are being sunk in 16 groups of 80 units each. Based on experiments conducted in Osaka last year, estimates are for a 20-30% increase in bottom fish in two years because of the blocks.

New Hebrides.—A tuna fishing company which will go into operation in New Hebrides next year will make use of Japanese fishing skill. It is a British organization, and has the financial backing of a number of planters and businessmen.

A refrigeration plant with a capacity of 2,000 metric tons of fish is promised, and seven 100-ton tuna clippers are reported on order in Japanese shipyards. They will be owned by the company, registered in Vila, and manned by a few skilled Japanese with mostly European and native crews. The company expects to begin active fishing in January 1956. The market for the frozen tuna presumably is the United States.

Norway.—Full-scale production of deep-frozen mackerel fillets in alginate jelly has been started by Norges Makrellag, the cooperative marketing organization of Norwegian mackerel fishermen.

Thoroughly tested in pilot operations, the method consists of deep-freezing the whole or filleted fish in alginate jelly. It is said that even after long storage the product retains the freshness and flavor of fresh fish.

Pakistan.—The first shipment of frozen shrimp from Pakistan reached the United States at Jersey City, New Jersey.

The initial consignment of 5,000 pounds is the culmination of two years of research and engineering and planning by a Pakistan company located in Karachi. The fish freezing plant installed by this corporation is the first of its kind in Pakistan. The Pakistan corporation will concentrate its freezing operations on shrimp initially, but within a very short time expects to handle substantial quantities of turtle meat, frog legs, and red snappers.

Portugal.—The Portuguese sardine canning industry had an outstanding profitable year in 1954 due largely to the fortunate coincidence of good catches in Portugal and poor catches in the important competing areas of North Africa, reports a U.S. Embassy dispatch from Lisbon.

The chief problems of the Portuguese sardine canning industry are: (1) the uneconomic dispersion of the business among dozens of small canneries; (2) the lack of centralized arrangements for purchasing fresh fish at the lowest possible price; (3) primitive methods of packing and canning, even in the newer plants; and (4) poor merchandising. Efforts are being made to correct these defects, but the current prosperity has removed some of the sense of urgency.

Russia.—The "Pushkin," first of 24 factory-ship trawlers of 1,230 lead weight tons ordered in East Germany by the Sudo Import Co., of Moscow, has taken its trial trips. A German crew and technicians manned the vessel accompanied by a number of experts from the Sudo Import Co. The 24 ships are to be delivered in 1955 and 1956 and will cost 200 million marks (about US$46 million).

The "Pushkin" was launched in December 1954. It measures 246 feet between perpendiculars, has a beam of 44 feet and a draft of 17 feet. A 1,900 hp. motor guarantees a speed of 12.5 knots. There is a slipway on the poopdeck for hauling in the special trawl over the stern. Details of the trawl are still secret.

Venezuela.—Competition among Venezuelan fish canners has forced low prices and added to the retailers profit, and to remain solvent the canners have been forced to lower the quality of their pack, a U.S. Embassy dispatch from Caracas states.

IRPLANE SPOTTING FLIGHT

ght of the California Depart- of Fish and Game plane, Cessna C, was made approximately five s daily from July 18-23, 1955. surveyed was the inshore area Pigeon Pt. in Central Califor- to Newport Beach in Southern ornia.

rpose was to determine the ward movement of the Pacific ine and to determine the distri- n and relative abundance of the hern anchovy. These were the results reported:

ficient coverage was hampered by l fog conditions, but by the end he five day period all the area pt to the north of Pigeon Pt., a ll area around Pt. Sal, a small around Pt. Mugu and the area ne south of Newport was covered.

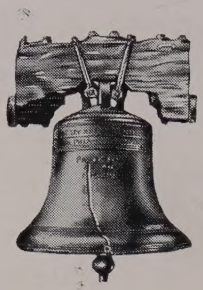
nchovy.—Three school groups of novies were observed in the area eyed. The school group in Mon- y Bay was concentrated in the thern end of the bay between ta Cruz and Sunset Beach State k. Approximately 110 schools were observed close to the beach and kelp beds. These schools were very thin in depth and most probably not more than about 10-20 tons of fish per school on an average.

The school group of anchovies between Santa Barbara and Carpenteria consisted of at least 119 anchovy schools each ranging from 20 to 50 tons each. This school group extended for about four miles in length and was about ¼ mile wide forming a band of fish parallel to the shore about 2 miles from the beach. Commercial fishermen reported these fish to be mixed adult and young anchovies.

The school group observed in Santa Monica Bay did not appear of much magnitude in mid-morning when 40-45 schools were observed. A second flight over the area in the afternoon of the same day revealed many more: approximately 210 schools scattered out in four areas of concentration throughout the bay. Bait sampling revealed these fish to be mixed adult and young fish.

Sardine.—Only one school group of adult sardines was observed during the flight. This school group was located between Santa Barbara and Pt. Conception with the main concentration off Goleta Pt. The schools in this area were small 5-10 ton "spots" predominately of adult sardines but some Pacific mackerel mixed in.

Jack Mackerel.—One school group of jack mackerel was observed off Pt. Vincente. Apparently it had recently moved into the area and was quickly located by the commercial fleet; 15 purse seine boats and three aerial spotters were working this fish.



Know Your Industry . . .

Keep abreast of the latest developments in your industry

Read Pan American Fisherman . . . *REGULARLY!*

MAIL THIS TODAY

SUBSCRIBE HERE!

Please enter my subscription for

1 year for $3

2 years for $5

In the United States and possessions.
Canada $4 per year; all other countries $5 per year

NAME_____

ADDRESS_____

CITY_____ZONE_____STATE_____

☐ Bill Me ☐ Check Enclosed

Mail to PAN AMERICAN FISHERMAN, Orange Savings Bank Bldg., Orange, Calif.

DIRECTORY
Marine Sales and Services

These Firms Specialize in Serving the Fishing and Waterfront Industries. They Understand Your Problems — Save Time and Money by Calling Them

CANVAS

"Canvas Sea Anchors"

AMERICAN AWNING & TENT COMPANY
1105 INDIA STREET, SAN DIEGO 1, CALIF.

"Everything in Canvas"

J. E. MEYER BElmont 9-0550

LICENSES

SAVE 25%
On Mexican Bait Licenses
Write or Phone to . . .
NAVIERA y COMERCIAL
SHIP BROKER
P.O. Box 119 Phone 126
ENSENADA, BAJA CALIF., MEXICO

SUPPLIES

Headquarters for . . .

MARINE AND INDUSTRIAL SUPPLIES

OIL BURNING RANGES

The Carlson Co.
Phone BElmont 3-5444
1760 Kettner • San Diego 1

BROKER

IVA L. BARKER

★

CUSTOM HOUSE BROKER

★

328 West F St. San Diego

BElmont 3-1785

FUEL INJECTOR SERVICE

Sales & Service
AMERICAN BOSCH
BENDIX SCINTILLA
ADECO FUEL PRODUCTS
TROJAN BATTERIES
SEACORD'S
1337 India St. San Diego 1
BElmont 4-1454

PROVISIONS

Provisioners to the Tuna Fleet . . .

CLIFFORD'S MARKET

"Rocco"
"Cliff" Maddox • "Bill" Magellan
PHONE ACademy 3-5782
3054 Rosecrans
SAN DIEGO • CALIFORNIA

INSURANCE

INSURANCE & BOAT BROKER

* * *

662 Rosecrans St.
ACademy 2-3188

* * *

M. E. Simas

San Diego 6, California

SALT

That Salty Salt

WESTERN SALT CO.

Plant
South End of San Diego Bay
Office
1245 National Ave
SAN DIEGO
CALIFORNIA

PAINTS

W. P. FULLER & CO.
MARINE PAINTS and GLASS
512 Front — BElmont 2-2033
803 7th — BElmont 9-4373
San Diego, California

PHOTOGRAPHY

Largest and Best Equipped Studio in San Diego

BUSCO-NESTOR
PHOTOGRAPHY
COMMERCIAL • INDUSTRIAL
MARINE
SALVAGE OPERATIONS
BElmont 9-4743
2670 5th Ave • San Diego, Cal

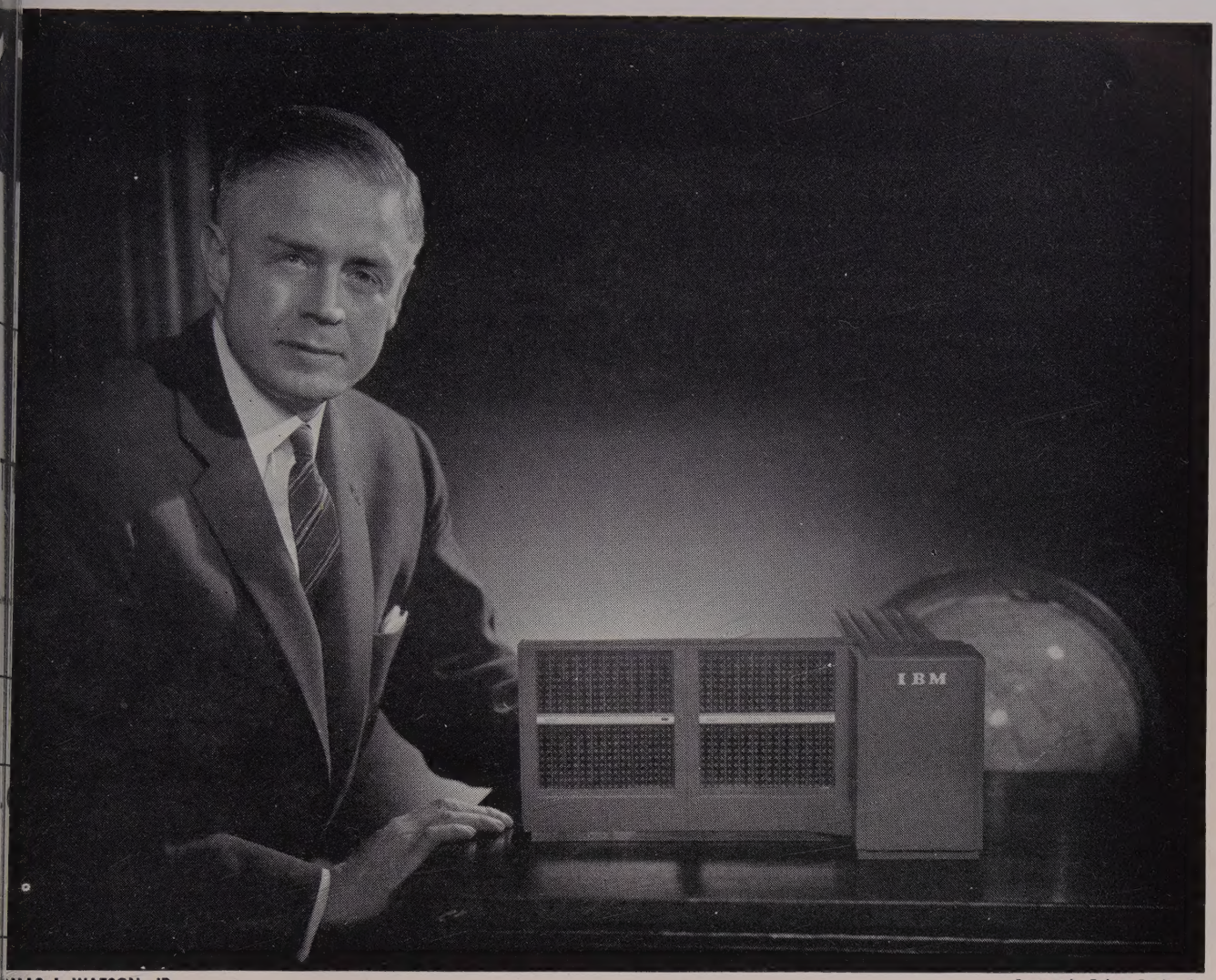
☆

Easy Way to Subscribe

On page 25 is a handy subscription blank; use it to make sure you don't miss an issue.

USE THE SUBSCRIPTION BLANK ON PAGE 25

☆



)MAS J. WATSON, JR.

Portrait by Fabian Bachrach

IBM was one of the first companies to . . ."

have always been proud of the fact that IBM was ie of the first companies to put into effect the Payroll vings Plan for the purchase of United States Savings nds, and I am delighted to see this patriotic endeavor ntinuing year by year and increasing throughout r organization. Today thousands of IBM employees, rough their participation in the Plan, are helping their untry and providing for the future of their families d themselves." **THOMAS J. WATSON, JR.,** ***President International Business Machines Corporation***

If employee participation in *your* Payroll Savings Plan is less than 50% . . . or, if *your* employees do not now have the opportunity to build for their future through the systematic purchase of U.S. Savings Bonds . . . a letter to: Savings Bonds Division, U.S. Treasury Department, Washington, D. C., will bring prompt assistance from your State Director. He will be glad to help you put on a person-to-person canvass that will put an application blank in the hands of every employee. This is all you have to do. Your men and women will do the rest, because they will welcome the opportunity to build for personal and national security.

The United States Government does not pay for this advertising. The Treasury Department thanks, for their patriotic donation, the Advertising Council and

PAN AMERICAN FISHERMAN

PUBLIC SERVICE ADVERTISING COUNCIL

POSTMASTER: Second class mail. If undeliverable notify sender stating reason on Form 3579, Pan American Fisherman, P.O. Box 650, Orange, Calif.

Coming...

NATIONAL TUNA WEEK
NOV. 3-12

The 1955 observance of National Tuna Week will be as beneficial to the California tuna industry as the industry itself makes it!

Your Association has cut the pattern for a full, national publicity and promotional program embracing television, radio, and related products advertising.

Millions of consumers are going to be made more aware of California tuna—its goodness, versatility, and place on the family menu.

With all of the resources at the industry's command backing up the campaign, this important annual food observance week can move more product—and keep it moving.

Let's make the very most of the opportunity . . .

CALIFORNIA FISH CANNERS ASSOCIATION INC.

Breast-O'-Chicken, Inc. • California Marine Curing & Packing Company
Coast Fisheries (Division of the Quaker Oats Company)
Franco-Italian Packing Company, Inc.
High Seas Tuna Packing Company, Inc. • Pan-Pacific Fisheries, Inc.
South Coast Fisheries, Inc. • South Pacific Canning Company
Star-Kist Foods, Inc. • Sun Harbor Packing Company
Van Camp Sea Food Company, Inc.
West Coast Packing Corporation • Western Canners Company